

Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 3, with the following amended paragraph:

This application is related to the following co-pending applications, each of which is being filed concurrently with this application and is incorporated by reference: (1) U.S. Application No. _____ 09/788,683, titled "Partial Bitwise Permutations"; (2) U.S. Application No. _____ 09/788,682, titled "Configurable Instruction Sequence Generation"; (3) U.S. Application No. _____ 09/788,684, titled "Polynomial Arithmetic Operations"; and (4) U.S. Application No. _____ 09/788,685, titled "Extended Precision Accumulator".

Please delete the previous abstract at page 22 and add the following new abstract:

A multiply unit includes support for arithmetic operations, binary polynomial operations, and permutations. To this end, the multiply unit may include an input data path that receives input operands, an arithmetic multiplier connected to receive the input operands, a binary polynomial multiplier having components separate and distinct from the arithmetic multiplier and connected to receive the one or more input operands, and a multiply unit output data path connected to receive an output of the arithmetic multiplier and connected to receive an output of the binary polynomial multiplier. The multiply unit also may include permutation logic that performs permutation operations on the input operands.

Include clean abstract on a separate sheet as an attachment